CLAIMS

1. Method to implement a column interleaving function, comprising the steps of:

* Providing a number of memories equal to the maximum
5   number of columns in the interleaver function,

* Inputting a stream of data entities,

* Writing said data entities successively into a memory, until all memories are completely filled or until all data entities are written,

10 * Performing selection and permutation on said memories,

* Reading out said data entities in said permuted memories, in a memory-by-memory fashion.

2. Method to implement a column interleaving function as in claim 1, wherein data entities in the input
15 stream are first written into a register and when said register is filled, the step of writing into a memory is applied.

3. Method as in claim 1 or 2, wherein said data entities are logical ones and zeros.

20   4. Method as in claim 1 or 2, wherein said data entities are multiple bit words.

5. Method as in claim 1 or 2, wherein said data entities are three bit words.

6. Method as in claim 2, wherein said
25 register is arranged to store each multiple bit word at one location in said memories.

7. Method as in any of the previous claims, wherein the number of columns used in the column interleaver function is changed on the fly, said number of
30 columns not exceeding said maximum number of columns.

8. A module for column interleaving, comprising means for applying a method as in any of the previous claims.

9. An integrated circuit device, comprising a module as in claim 8.

10. A communication system device, comprising a module as in claim 8 or an integrated circuit device as in claim 9.

11. A spread-spectrum communication apparatus comprising a module as in claim 8 or an integrated circuit device as in claim 9.

12. A column interleaver, comprising a number of memories equal to the maximum number of columns desired in the interleaver and means to perform column selection and permutation.

13. The column interleaver as in claim 12, further comprising a register.